

#### ABSTRACT OF THE DISCLOSURE

A method for providing environmental monitoring and control includes providing a network of wireless nodes, the wireless nodes includes an array of sensor nodes and an array of actuator nodes, each wireless node including a wireless transceiver, a processor and one of a sensor device or an actuator device. In one embodiment, the receiver wireless node schedules the time slot for the next transmission by sending an acknowledgement message from the receiver wireless node to the sender wireless node including a time slot for the next scheduled transmission. The wireless nodes are turned off until the next scheduled time slot when the wireless nodes are turned on synchronously. In another embodiment, the sender wireless node schedules the next transmission by sending a message including a time slot for the next scheduled transmission and the receiver wireless node sends an acknowledgement message acknowledging the selected time slot.